[Type of Document] Specification

[Title of the Invention] CAMERA APPARATUS AND METHOD OF
TAKING PICTURES

[SCOPE OF PATENT CLAIM]

5 [CLAIM 1] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a
point of eye fixation of a user within a camera screen;

an importance computation unit which

10 determines levels of importance for respective areas of
the image acquired by said camera unit in accordance
with the detection by said line-of-sight detection unit;
and

a number-of-gray-scale-level determining unit

15 which changes a number of gray scale levels for the
respective areas of the image in response to the
determination by the importance computation unit.

[CLAIM 2] A camera apparatus, comprising:

a camera unit which acquires an image;

20 a line-of-sight detection unit which detects a
point of eye fixation of a user within a camera screen;

an importance computation unit which
determines levels of importance for respective areas of
the image acquired by said camera unit in accordance
25 with the detection by said line-of-sight detection unit;

and

a color interpolation processing unit which changes color interpolation processing for the respective areas of the image in response to the determination by the importance computation unit.

[CLAIM 3] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a point of eye fixation of a user within a camera screen;

an importance computation unit which determines levels of importance for respective areas of the image acquired by said camera unit in accordance with the detection by said line-of-sight detection unit; and

a sharpness enhancement processing unit which changes sharpness enhancement processing for the respective areas of the image in response to the determination by the importance computation unit.

[CLAIM 4] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a point of eye fixation of a user within a camera screen;

an importance computation unit which determines levels of importance for respective areas of the image acquired by said camera unit in accordance

with the detection by said line-of-sight detection unit; and

a noise removal processing unit which changes noise removal processing for the respective areas of the

5   image in response to the determination by the importance computation unit.

[CLAIM 5] The camera apparatus as claimed in claim 1, wherein said number-of-gray-scale-level determining unit increases the number of gray scale levels in a first

10 area compared with a second area that has a smaller level of importance than the first area.

[CLAIM 6] The camera device as claimed in claim 2, wherein said color interpolation processing unit performs first processing in a first area, and performs

15 second processing in a second area that has a smaller level of importance than the first area, the first processing generating an image having higher quality than the second processing, and the second processing being faster than the first processing.

20 [CLAIM 7] The camera device as claimed in claim3, wherein the sharpness processing unit performs first processing in a first area, and performs second processing in a second area that has a smaller level of importance than the first area, the first processing

25 generating an image having higher quality than the

second processing, and the second processing being faster than the first processing.

[CLAIM 8] The camera device as claimed in claim 4, wherein said noise removal processing unit performs

5   first processing in a first area, and performs second processing in a second area that has a smaller level of importance than the first area, the first processing generating an image having higher quality than the second processing, and the second processing being

10 faster than the first processing.

[CLAIM 9] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a point of eye fixation of a user within a camera screen;

15   an importance computation unit which determines levels of importance for respective areas of the image acquired by said camera unit in accordance with the detection by said line-of-sight detection unit; and

20   an image processing unit which performs at least one of processing of changing a number of gray scale levels for the respective areas of the image, processing of changing color interpolation processing for the respective areas of the image, processing of

25 changing sharpness enhancement processing for the

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respective areas of the image, and processing of

changing noise removal processing for the respective

areas of the image in response to the determination by

the importance computation unit.

5 [CLAIM 10] A method of acquiring an image, comprising

the steps of:

acquiring an image;

detecting a point of eye fixation of a user

within a camera screen;

10 determining levels of importance for

respective areas of the acquired image in accordance

with the detection of the point of eye fixation; and

changing a number of gray scale levels for the

respective areas of the image in response to the

15 determined levels of importance.

[CLAIM 11] A method of acquiring an image, comprising

the steps of:

acquiring an image;

detecting a point of eye fixation of a user

20 within a camera screen;

determining levels of importance for

respective areas of the acquired image in accordance

with the detection of the point of eye fixation; and

changing color interpolation processing for

25 the respective areas of the image in response to the

determined levels of importance.

[CLAIM 12] A method of acquiring an image, comprising the steps of:

acquiring an image;

5 　　detecting a point of eye fixation of a user within a camera screen;

determining levels of importance for respective areas of the acquired image in accordance with the detection of the point of eye fixation; and

10 　　changing sharpness enhancement processing for the respective areas of the image in response to the determined levels of importance.

[CLAIM 13] A method of acquiring an image, comprising the steps of:

15 　　acquiring an image;

detecting a point of eye fixation of a user within a camera screen;

determining levels of importance for respective areas of the acquired image in accordance

20 with the detection of the point of eye fixation; and

changing noise removal processing for the respective areas of the image in response to the determined levels of importance.

[Detailed Description of the Invention]

25 [Field of the Invention]